A study on various issues of Hyper Digitalization in Online Teaching: Development of Software Solution to Optimize Online Teaching

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Synopsis

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Supervised by:

JV'n Dr. Sunita Bhati
Associate Professor
Department of Science & Technology
Faculty of Education & Methodology
Jyoti Vidyapeeth Women's University
Jaipur (Rajasthan), India

Submitted by:

JV'n Bhumika Dasoar
JVR-2143
JVR-I/21/5804
Research Scholar
Computer Science
Batch: 2021-2024

1. Introduction:

Digitalization is growing day by day. It means converting every functionality in digital form. Conversion from paper to digital has been in process from a while. The beginning of Digitalization is clearly visible when paper pictures are converted into Digital pictures, photo negatives into SD Cards. This was the slow but the beginning of the process which all of the sudden catch a speed in 2016 when Government of India has announced Demonetization of all banknotes of Rs.500 & Rs.1000 and announced the issuing of new banknotes of Rs.500 & Rs.2000. Where digitalization took a boom and Digital money took the place of paper money the ratio of digital transactions via payments wallets and banks are increasing day by day. This was the first wave of digitalization faced by India. This process got settle with time passes and digitalization was running in a straight pace when in year 2019 this pandemic-Covid-19 strike which leads to lockdown in 2020 & forced to adopt new ways of working and hike in Digitalization. New ways leads to transfer off all the workings like all the offices (Govt./Private), School, Colleges etc. leads to Work From Home where Office working, School classes, College Classes etc. took place via online mode. This wave of Digitalization has increased many job opportunities for people related to IT, Data Entry etc. Every document from Birth to Death is digital Now a Days. This pandemic has forced the world to go digital and make their digital Repositories.

This all have a severe impact on Academics all the School and College workings gone digital and it gave understanding, Knowledge and growth of Students a pause. Students used to be the free minded people whose mind used to flow with different ideas which have always been the key of success but those free minds are in pause cause no matter what we say Digitalization is disaster for Academics. But if we see it in pandemic Time it has been the solution to the all. It has shown a new light as it now became Academic Digitalization which means all the offline workings of academics will now going on in Digital form i.e. online classes, online labs online, project presentations etc. The main aim is to bring a light on the area where we are losing the key to our success caused by pandemic which is our Academic Area or our teachers & Students who are facing worst case in Online Teaching which is based on the information obtained from unstructured text data which is collected from publicly available datasets. The Research intends to states the problems faces by teachers and students in online mode Education or Academics and developing a solution to it by designing a platform to make online teaching easy with the

help of Python programming.

2. Literature Review:

(Lorenz S Neuwirth, Svetlana Jovic, B Runi Mukherji) [7] The coronavirus (COVID-19) pandemic has required faculty and students to adapt to an unprecedented challenge and rapidly transition from traditional face-to-face instruction to distance learning formats through virtual classrooms. While most campuses trained faculty to ensure quality and maintenance of the curriculum through virtual classrooms, less consideration has been given to training students, who face equal challenges in adapting to this abrupt change in the delivery of the curriculum. Few approaches have been developed for students to facilitate their involuntary transition to virtual classrooms and maintenance of appropriate online learning behaviours and etiquette. Presented here are a series of propositions to help to maintain and enhance the quality of college student engagement and activity in the virtual classroom.(Alexey V. Lubkov , Oksana V. Gordienko , Anastasiya A. Sokolova) [8] Digitization is a global, all-encompassing process, affecting all spheres of human life and society. In this context education is not an exception, and the changes taking place in it are a natural result of the rapid development, wide dissemination and accessibility of information technology and networks. Understanding the methodological and philosophical foundations and principles of the process is a necessary phase of the transition to the digital education, the digital society and the digital economy. In the narrow sense digital education can be understood as a conversion of learning materials and the learning process itself from analog to digital format (i.e. electronic textbooks, electronic libraries, open online courses and webinars, video lectures, etc.), but this phenomenon can be considered in broader terms as the complex changes of infrastructural, managerial, behavioral, cultural nature. Recent events (quarantine almost all over the world because of the Covid-19 pandemic) have made it clear that the broad approach to digitization is necessary for the translation of all education systems across the world to an online format, since it refers not only to the form of presenting educational and control materials but first and foremost to the aspects of general behavior, psychological, cognitive and axiological issues.(Tudorel Toader , Marieta Safta , Cristina Titiris, că and Bogdan Firtescu) [9] The present study also aims to harness the university experience of these times, from some of the main Romanian university centres; the method used was a quantitative and qualitative research based on a questionnaire, which was answered by a number of 258 university teachers and 1569 students from prestigious public and private universities. The

results of this analysis allowed us to conclude that most of the participants in the university educational process have adapted to the online activity, and the latter 'saved' the academic years 2019–2020 and, respectively, 2020–2021. The present study is useful for tertiary education institution and policymakers in terms of formulating strategies and policy recommendations to support teachers and students during any future pandemics. (Netta Iivari, Sumita Sharma, Leena Ventä-Olkkonen) [10] Children of today have been surrounded by digital technology since their birth. However, children of today are not equally equipped for their technology rich future: various kinds of digital divides still prevail in the society and affect the young generation and their digital futures. Schools and education of children should undergo an extensive digital transformation to be able to meet the needs of the young generation and their digitalized future. The COVID-19 pandemic has suddenly and abruptly forced schools and education indeed to engage in such a transformation. In this study we examine the digital transformation initiated by the COVID-19 pandemic in the basic education of the young generation, the variety of digital divides emerging and reinforced, and the possible barriers reported along the way.

3. Problem Statement:

Several Students and teachers faced problem in studying and teaching in this pandemic which raised a huge question what the purpose of studying is is it to score marks/ certificates/ degrees etc. or to gain knowledge. This pandemic has shown the worst but has raised a very big scenario if we have to sit at home then how we can give the best of the education. How we can improvise online teaching for future worst case scenarios. This research will identify the improvised methods of online Academics and provide a platform for students to get the best of the online education.

4. **Research Objectives**:

The main aim of the proposed research methodology is to bring a light on the area where we are losing the key to our success caused by pandemic which is our Academic Area or our teachers & Students who are facing worst case in Online Teaching which is based on the information obtained from unstructured text data which is collected from publicly available datasets. The prominent research objectives of this research are:

- To determine the prevalence of Analysis of Hyper Digitalization in View of Academic Future during Pandemic.
- To analyze the relationship between different factors that stimulate Hyper Digitalization

such as Students experience for online studies, Teachers experience for online teaching etc.

- To analyze unstructured texts and to extract relevant information that identifies the act of Academic Digitalization.
- To explore Student's attitude & Teacher's attitude of being asked about online teaching.
- To prepare a platform for Online Academic Excellence.
- To make Pandemic Teaching more Effective as offline Teaching.

5. Research Methodology:

The Research intends to states the problems faces by teachers and students in Online mode Education or Academics and developing a solution to it by desiging a platform to make online teaching easy with the help of Python programming.

The proposed approach will be developed in three stages: theoretical assumption, model building process, and analyzing the performance of the model.

Stage 1 Theoretical Assumption

This is the initial stage where the theoretical assumption is made based on the data generating mechanism i.e., different factors that lead to the development of a case study. The theoretical assumption integrates the data into the Python Coding. This stage requires qualitative research analysis that involves genuine interviews, Surveys and observations. The main aim of this stage is to identify the type of information required for our analysis

Stage 2 Model Building

This stage is the important phase of this research since it involves the implementation of the proposed Python Coding. This stage involves other subsections such as: data extraction, documentation of the obtained data, model development, and performance evaluation. Data extraction is the initial stage where the data will be obtained from various possible data fields and datasets.

Stage 3 Analyzing the Performance of the Model

This is the last stage of the implementation process where the performance of the proposed approach is compared with other existing algorithms to validate its efficiency.

6. Expected Outcome:

The preliminary objective of the proposed research is to bring a light on the area where we are losing the key to our success caused by pandemic which is our Academic Area or our teachers & Students who are facing worst case in Online Teaching. The study will extract the relevant

information from the texts and to identify relevant data for features from the text. Basically the expectation from this research is to create an Application/Software which gives a platforms to students to have a proper offline Class room experience in online classroom which if faculty is facing any technical issue she have her already recorded lecture, personal interaction classroom will be created, students can see only faculty but faculty can see all the class, students video is permanently on throughout the class no turning off of the video is allowed.

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